

II. Claim Rejections under 35 U.S.C. § 112

Rejection under 35 U.S.C. § 112, first paragraph

Claims 6, 7, and 31 are rejected under 35 U.S.C. § 112, first paragraph for allegedly failing to satisfy the written description requirement. The Applicants respectfully traverse the rejection.

Claims 6, 7 and 31 recite "derivatives." The rejection is based on the specification failing "to describe what these derivatives are." Office Action at p. 3.

The specification must convey "with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention."

M.P.E.P. § 2163.02; see, e.g., *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). It is not necessary that the claimed subject matter be described literally. M.P.E.P. § 2163.02. There is a strong presumption that an adequate written description of the claimed invention is present in the specification as filed. M.P.E.P. § 2163.03; *In re Wertheim*, 541 F.2d 257, 262 (CCPA 1976).

It appears that the Examiner is requiring literal support in the specification. This is not the standard for determining whether the written description requirement is satisfied. Applicants respectfully submit that the meaning of "derivatives" is well known to one of ordinary skill in the art. For example, the dictionary defines a "derivative" as "a chemical substance related structurally to another substance and theoretically derivable from it." Merriam-Webster's Collegiate® Dictionary, Tenth Edition, 2001. From this well-understood meaning, it follows then that one of ordinary skill in the art understands how

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to theoretically obtain derivatives of polysaccharide polymers, cationic starches, cationic guar gums, and C₅ to C₇ saccharide units.

Accordingly, Applicants respectfully submit that this rejection under 35 U.S.C. § 112, first paragraph, is in error and respectfully request that the rejection be withdrawn.

Rejection under 35 U.S.C. § 112, second paragraph

Claims 6, 7, and 31 are rejected under 35 U.S.C. § 112, second paragraph for indefiniteness. The Applicants respectfully traverse the rejection.

In determining whether the claims describe the subject matter with a reasonable degree of clarity and particularity, the following must be considered:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

M.P.E.P. § 2173.02. Thus, definiteness is determined from the point of view of one of ordinary skill in the art. *Id.* (“[T]he examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope.”).

The Examiner believes the claims 6, 7, and 31 are indefinite because they do not “recite what these derivatives are.” Office Action at p. 3. This requirement, however, does not comport with the standard stated in the M.P.E.P. and thus, the Examiner has failed to meet the burden of proving indefiniteness. Missing from the Office Action is a rationale of why “derivative” is indefinite. As discussed above, describing compounds

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as a "derivative" is prevalent in the chemical arts and its meaning is well understood by those of ordinary skill in the art. It appears that the Examiner is concerned with the breadth of compounds encompassed by "derivative." Breadth, however, is not indefiniteness. M.P.E.P. § 2173.04.

Accordingly, Applicants respectfully submit that this rejection under 35 U.S.C. § 112, second paragraph, is in error and respectfully request that the rejection be withdrawn.

III. Claim Rejections under 35 U.S.C. § 102

Claims 1-9, 16, 17, 19, 20, 24-26, 29, 31, 33, 35, 45, 46, and 47 are rejected under 35 U.S.C. is § 102(b) as anticipated by U.S. Patent No. 5,597,811 ("*Gruber*"). The Applicants respectfully traverse the rejection.

A rejection under § 102 is only proper when the claimed subject matter, in this case a method of protecting keratinous fiber from extrinsic damage, is identically described or disclosed in the prior art. *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972); see also M.P.E.P. § 706.02(a) ("For anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly.").

Importantly, each and every element of a claim must be set forth in the prior art reference for there to be anticipation. See M.P.E.P. § 2131.

The Examiner alleges that *Gruber* teaches a personal care composition comprising water-soluble derivatives and polyquaternium-10. Office Action at p. 4; see *Gruber* at col. 8, l. 50-53.

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Applicants respectfully submit that *Gruber* fails to disclose each limitation of independent claims 1 and 151. "The identical invention must be shown in as complete detail as is contained in the ... claim." M.P.E.P. § 2131; *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). First, the language of col. 8, l. 50-53 does not provide sufficient detail to achieve the claimed invention. For example, this passage contains many phrases that suggests that the ingredients are optional:

Typical mousses may contain a solvent like water and, or alcohol, a surfactant like oleth-10, a feel modifier like isopropyl palmitate and a resin like polyquaternium-10 or poly(vinylmethacrylate)/vinylmethacrylate copolymer.

Col. 8, l. 50-53. Applicants assert that such terms do not precisely lay out the claimed invention. It is not clear which of these ingredients the mousse may contain. One can only arrive at the claimed invention by picking and choosing from the optional ingredients recited in col. 8, l. 50-53. Thus, *Gruber* does not uphold the rigorous standard of 35 U.S.C. § 102 of describing the identical claimed invention in complete detail to anticipate independent claims 1 and 151.

Second, *Gruber* does not teach the effective amounts of the claimed compounds to achieve durable conditioning. While the description at col. 8, l. 50-53 teaches optional ingredients for a mousse, nowhere does this description teach the amounts required to obtain a composition that durably conditions. Even if it can be argued that one of ordinary skill in the art can determine the respective amounts of ingredients to obtain a mousse, the resulting mousse does not necessarily cause durable conditioning. The objective of a mousse is to achieve holding and styling characteristics. These

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properties are very different from durable conditioning. Accordingly, *Gruber* fails to disclose explicitly or inherently the effective amounts of the claimed ingredients.

Accordingly, Applicants respectfully submit that the rejection under 35 U.S.C. § 102 has been overcome and request that the rejection be withdrawn.

IV. Claim Rejections under 35 U.S.C. § 103

Dunlop, Gruber and Yoshihara

Claims 1-9, 13-20, 24-26, 29, 31, 35, and 37-48 are rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Publication No. 2002/0102228 ("*Dunlop*") in view of U.S. Patent No. 5,597,811 ("*Gruber*") and further in view of U.S. Patent No. 5,332,581 ("*Yoshihara*"). Applicants respectfully traverse this rejection.

The Examiner states that *Dunlop*'s compositions encompass "most aspects of the claimed invention" except for the heat activation step of claim 48. Office Action at p. 6. Thus, the Examiner relies on *Yoshihara* for teaching a heat activation step. *Id.* The Examiner also relies on *Gruber* for disclosing a composition that comprises glucosamine and polyquaternium-10. *Id.*

In order to establish a *prima facie* case of obviousness, the Examiner must demonstrate that there is some suggestion or motivation, either in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or combine reference teachings. See M.P.E.P. § 2143. Evidence of a suggestion or motivation to modify or combine references teachings must be "clear and particular." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999).

The Applicants respectfully disagree that *Dunlop* teaches "most aspects of the claimed invention." *Dunlop* is directed to an anti-dandruff shampoo containing an anionic surfactant, a conditioning agent, an anti-dandruff agent, a cationic polymer, and water. Paragraph [0022]. For each class of ingredients, however, *Dunlop* lists numerous possibilities resulting in a near infinite combination of ingredients. Because Applicants' claims are directed to a more specific set of compounds, many of the combinations of *Dunlop* would not fall within the scope of Applicants' claims. *Dunlop* fails to guide one to choose specifically at least one compound comprising at least two quaternary ammonium groups and at least one compound comprising at least one C₅ to C₇ saccharide unit substituted with at least one amino group. Such broad disclosures do not comport with the rigid requirement that the disclosure's suggestion to modify or combine must be "clear and particular."

For example, the Examiner relies on *Dunlop's* disclosure of a zwitterionic surfactant. Office Action at p. 5. This description only generally informs one that the surfactant contains positive and negative groups that are equally ionized. *Hawley's Condensed Chemical Dictionary*, Thirteenth Edition, 1997. Nowhere does *Dunlop* cause one of ordinary skill in the art to zero in on any of the claimed compounds.

Additionally, *Dunlop* gives very rigid requirements for an effective shampoo:

(1) bioavailability and coverage of the anti-dandruff active for anti-dandruff efficacy; (2) comb-ability of wet hair and (3) clean hair feel; and (4) the inherent ability of the anti-dandruff active to inhibit the growth of microorganisms. Paragraph [0009]. *Dunlop's* shampoo composition further depends on the level and type of cationic polymer employed in the composition, the type of anti-dandruff agent employed, the amount of

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anionic surfactant employed. Paragraph [0010]. Thus, it's not clear that the claimed compounds will work in *Dunlop's* shampoo. Thus, Applicants' disagree that there is a clear teaching in *Dunlop* of the claimed compositions.

In light of *Dunlop's* rigid requirements discussed above, *Dunlop* cannot be combined with *Yoshihara* without a clear suggestion to do so. The Examiner relies on *Yoshihara's* teaching of heating the compositions at 30°C to 50°C for 10 to 35 minutes upon applying the composition to the hair. Office Action at p. 6; see also *Yoshihara* col. 5, l. 52-57. *Yoshihara* is directed to a composition very different from that of *Dunlop* comprising a "specific dialkylene glycol monoalkyl ether" combined with a "specific aromatic alcohol derivative and an acid." Col. 1, l. 37-45. While the heat treatment step of *Yoshihara* may work for *Yoshihara's* compositions, there is no teaching or suggestion that it will apply to *Dunlop's* shampoo. A heat treatment may "impair product stability, aesthetics or performance" of *Dunlop's* compositions. See *Dunlop*, paragraph [0118].

Dunlop also cannot be combined with *Gruber* without a clear suggestion. First, the composition of *Dunlop* and the composition of *Gruber* are directed toward very different objectives. *Dunlop* teaches anti-dandruff shampoos, whereas, *Gruber*, in the example cited by the Examiner, teaches a mousse. Moreover, in light of *Dunlop's* rigid requirements, there is no clear teaching that the ingredients in *Gruber's* mousse will work in *Dunlop's* anti-dandruff shampoo. Finally, Applicants contend that *Gruber* does not teach the claimed compounds in effective amounts to achieve durable conditioning, as alleged.

The combination is thus premised on hindsight, where individual components from different disclosures are combined without a suggestion to do so. Instead,

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Applicants' claims have been used as a template in order to arrive at the combination of references. Applicants respectfully submit that a *prima facie* case has not been established and request that the rejection be withdrawn.

Dunlop and Rath

Claims 151 and 152 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 2002/0102228 ("*Dunlop*") in view of U.S. Patent No. 5,993,792 ("*Rath*"). Applicants respectfully traverse this rejection.

The Examiner concedes that *Dunlop* fails to teach how the product is packaged and relies on *Rath* for disclosing packaging hair products as kits. Office Action at p. 7.

Rath teaches a multi-component conditioner system having a first package containing a low-viscosity aqueous base composition and a second package containing a compatible liquid thickening composition. Col. 1, l. 28-33. The shampoo base has a low viscosity to easily combine it with the additional ingredients. Col. 2, l. 63-65.

Applicants submit that the combination of *Dunlop* and *Rath* is improper. *Dunlop* does not teach a need for separating the thickener from the shampoo base. Although the viscosity of the shampoo can be modified by thickeners, there is no teaching that the modification is performed by an end consumer. Paragraph [0220]. When read as a whole, *Dunlop* is directed to shampoos packaged as a single formulation. There is no suggestion or motivation to modify *Dunlop* to package the shampoo base and thickener separately.

Even if the combination was proper, it would not teach all the limitations of claims 151 and 152. The claimed kits provide the at least one compound comprising at least

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two quaternary ammonium groups in a first compartment and the at least one compound comprising at least one C₅ to C₇ saccharide unit substituted with at least one amino group in a second compartment. *Rath* does not require that the claimed saccharide compound be separate from the claimed quaternary ammonium compound. Rather, *Rath* motivates one of ordinary skill in the art to package a formulation by separating a thickener from the shampoo base. Thus, even if *Dunlop* and *Rath* were combined, the combined teachings would not guide one of ordinary skill in the art to the claimed invention.

Applicants respectfully submit that a *prima facie* case has not been established and request that the rejection be withdrawn.

Gruber and Applicants' specification

Claims 14, 15, and 39-44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,597,811 ("*Gruber*") in view of applicant's allegedly admitted prior art. Applicants respectfully traverse this rejection.

The Examiner concedes that *Gruber* fails to teach at least one additional sugar and turns to Applicants' specification at p. 3, l. 5-15 allegedly admitting "that sugars and sugar derivatives are added to hair compositions." Office Action at p. 8. According to the Examiner, the motivation for combining these teachings lie in a need to improve tactile and elastic properties of the hair. *Id.*

The Applicants respectfully disagree. As discussed above, *Gruber* does not disclose, teach or suggest all of the limitations of independent claim 1. Moreover, the passage in *Gruber* relied on by the Examiner, col. 8, l. 50-53, is directed to hair mousse.

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Hair mousse is used in the art for styling purposes. Merriam-Webster's Collegiate® Dictionary, Tenth Edition, 2001. *Gruber* does not teach the need for hair mousses able to impart such properties on the hair. Likewise, the Applicants' specification at p. 3, l. 5-15 does not motivate one of ordinary skill in the art to add sugars to *Gruber's* hair mousses. This passage generally discusses the use of sugars in hair care compositions to impart certain properties to the hair but provides no specific motivation to add these improvements to mousses. Without the requisite motivation to combine, Examiner has failed to establish a *prima facie* case of obviousness.

The Examiner further contends that "it is not inventive to discover the optimum workable ranges by routine experimentation." Office Action at p. 8. It is well established, however, that "a particular parameter must first be recognized as a result-effective variable ... before the determination of the optimum or workable ranges... might be characterized as routine experimentation." M.P.E.P. § 2144.05.II.B; *in re Antonie*, 559 F.2d 618 (CCPA 1977). Because none of the references teach a composition comprising the claimed compounds, the amounts recited in claims 14, 15, 43, and 44 could not have been determined by routine experimentation.

Applicants respectfully submit that a *prima facie* case has not been established and request that the rejection be withdrawn.

V. Conclusion

In view of the foregoing remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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